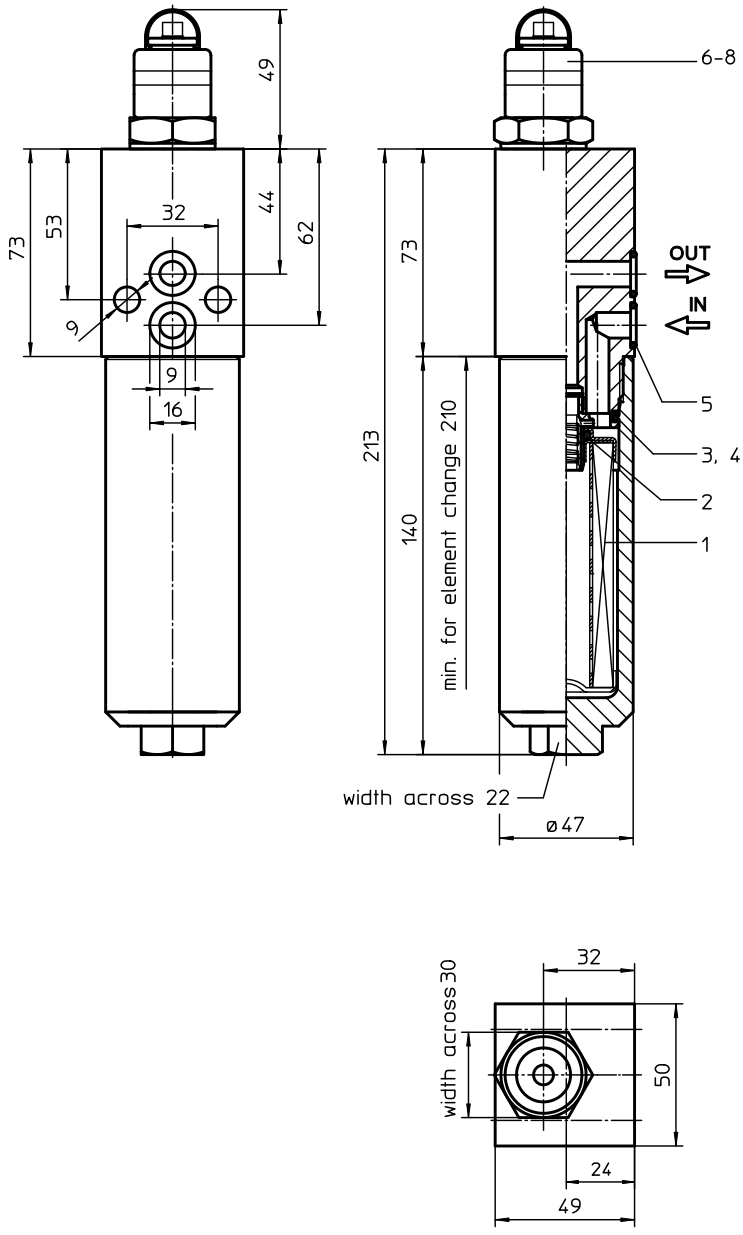
PRESSURE FILTER, manifold mounted
Series HPF 30.51648 DN 10 PN 210

Sheet No.
51648-4



1. Type index:

1.1. Complete filter: (ordering example)

HPF.	30.	51648.	10VG.	HR.	E.	P.	-.
1	2	3	4	5	6	7	8

F.	2.	-.	S2.	AOR
9	10	11	12	13

1 **series:**
HPF = medium pressure filter, manifold mounted with indicator

2 **nominal size:** 30

3 **execution** according to sheet-no. 51648

4 **filter-material and filter-fineness:**
25 VG= 20 $\mu m_{(c)}$, 16 VG= 15 $\mu m_{(c)}$,
10 VG= 10 $\mu m_{(c)}$, 6 VG= 7 $\mu m_{(c)}$,
3 VG = 5 $\mu m_{(c)}$ Interpor fleece (glass fibre)

5 **resistance of pressure difference for filter element:**
30 = Δp 30 bar
HR = Δp 160 bar (rupture strenght Δp 250 bar)

6 **filter element design:**
E = single-end open

7 **sealing material:**
P = Nitrile (NBR)
V = Viton (FPM)

8 **filter element specification:**
- = standard
VA = stainless steel
IS06 = see sheet-no. 31601

9 **connection:**
F = manifold mounted

10 **connection size:**
2 = DN 10

11 **filter housing specification:**
- = standard

12 **internal valve:**
S2 = with by-pass valve Δp 7,0 bar

12 **clogging indicator:**
AOR = visual, see sheet-no. 1606

1.2. Filter element: (ordering example)

01E.	30.	10VG.	HR.	E.	P.	-
1	2	4	5	6	7	8

1 **series:**
01E. = filter element according to INTERNORMEN factory specification

2 **nominal size:** 30

4 - 8 see type index-complete filter

weight: approx. 2,4 kg

Changes of measures and design are subject to alteration!

2. Spare parts:

item	qty.	designation	dimensions	article-no.	
1	1	filter element	01E. 30...		
2	1	O-ring	11 x 3	312603 (NBR)	312727 (FPM)
3	1	O-ring	32 x 2,5	306843 (NBR)	308268 (FPM)
4	1	support ring	37 x 2,1 x 1	305466	
5	2	O-ring	12 x 2	311014 (NBR)	310271 (FPM)
6	1	clogging indicator, visual	AOR	see sheet-no. 1606	
7	1	O-ring	15 x 1,5	315357 (NBR)	315427 (FPM)
8	1	O-ring	22 x 2	304708 (NBR)	304721 (FPM)

3. Description:

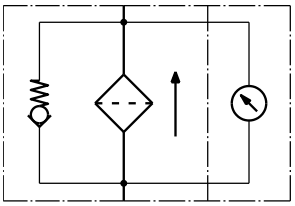
Pressure filter of the series HPF 30.51648 are suitable for a working pressure up to 210 bar.
The pressure peaks are absorbed by a sufficient margin of safety. The filters are flange mounted to the hydraulic system.
The filter element consists of star-shaped, pleated filter material which is supported on the inside by a perforated core tube and is bonded to the end caps with a high-quality adhesive. The flow direction is from outside to inside.
Filter elements are available down to 4 $\mu m_{(c)}$.
INTERNORMEN-Filter elements are known as elements with a high intrinsic stability and an excellent filtration capability, a high dirt-retaining capacity and a long service life.
INTERNORMEN-Filter are suitable for all petroleum based fluids, HW-emulsions, most synthetic hydraulic fluids and lubrication oils.
INTERNORMEN-Filter elements are available up to a pressure difference resistance of Δp 160 bar and a rupture strength of Δp 250 bar.
The internal valve is integrated into the centering pivot for the filter element.
After reaching the opening pressure the by-pass valve causes that an unfiltered partial flow passes the filter.

4. Technical data:

temperature range:	-30°C to + 80°C (for a short time + 100°C)
survival temperature:	-40°C to + 100°C
operating medium:	mineral oil, other media on request
max. operating pressure:	210 bar
test pressure:	300 bar
connection system:	manifold mounted
housing material:	C-steel
sealing material:	Nitrile (NBR) or Viton (FPM), other materials on request
installation position:	vertical
volume tank:	0,1 l

Classified under the Pressure Equipment Directive 97/23/EC for mineral oil (fluid group 2), Article 3, Para. 3.
Classified under ATEX Directive 94/9/EC according to specific application (see questionnaire sheet-no. 34279-4).

5. Symbol:



6. Pressure drop flow curves:

Precise flow rates see INT-Expert-System Filter respectively Δp-curves - depending on filter fineness and viscosity.

7. Test methods:

Filter elements are tested according to the following ISO standards:

ISO 2941 Verification of collapse/burst resistance
ISO 2942 Verification of fabrication integrity
ISO 2943 Verification of material compatibility with fluids
ISO 3723 Method for end load test
ISO 3724 Verification of flow fatigue characteristics
ISO 3968 Evaluation of pressure drop versus flow characteristics
ISO 16889 Multi-pass method for evaluating filtration performance